

FIG. 1
(Prior Art)

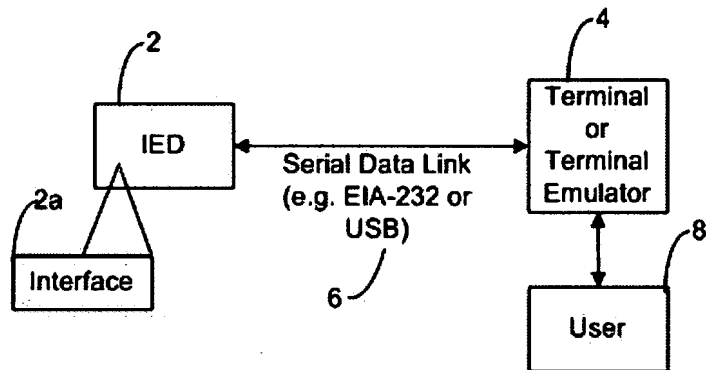
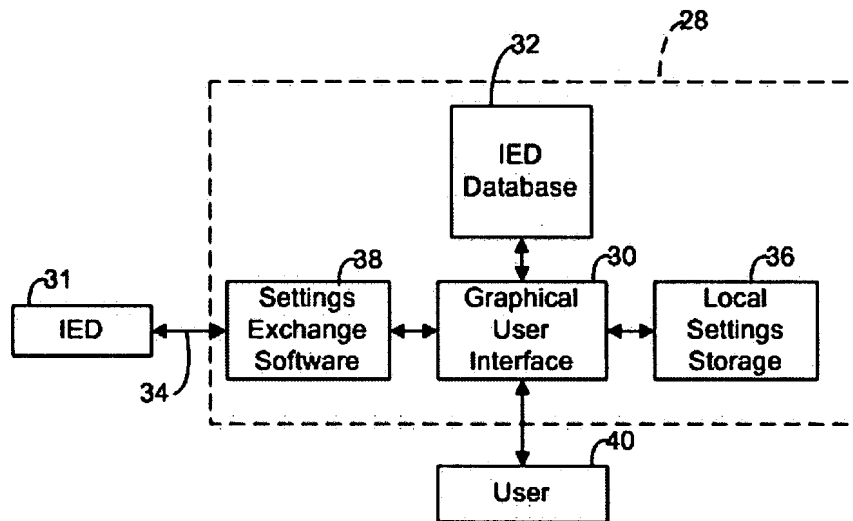
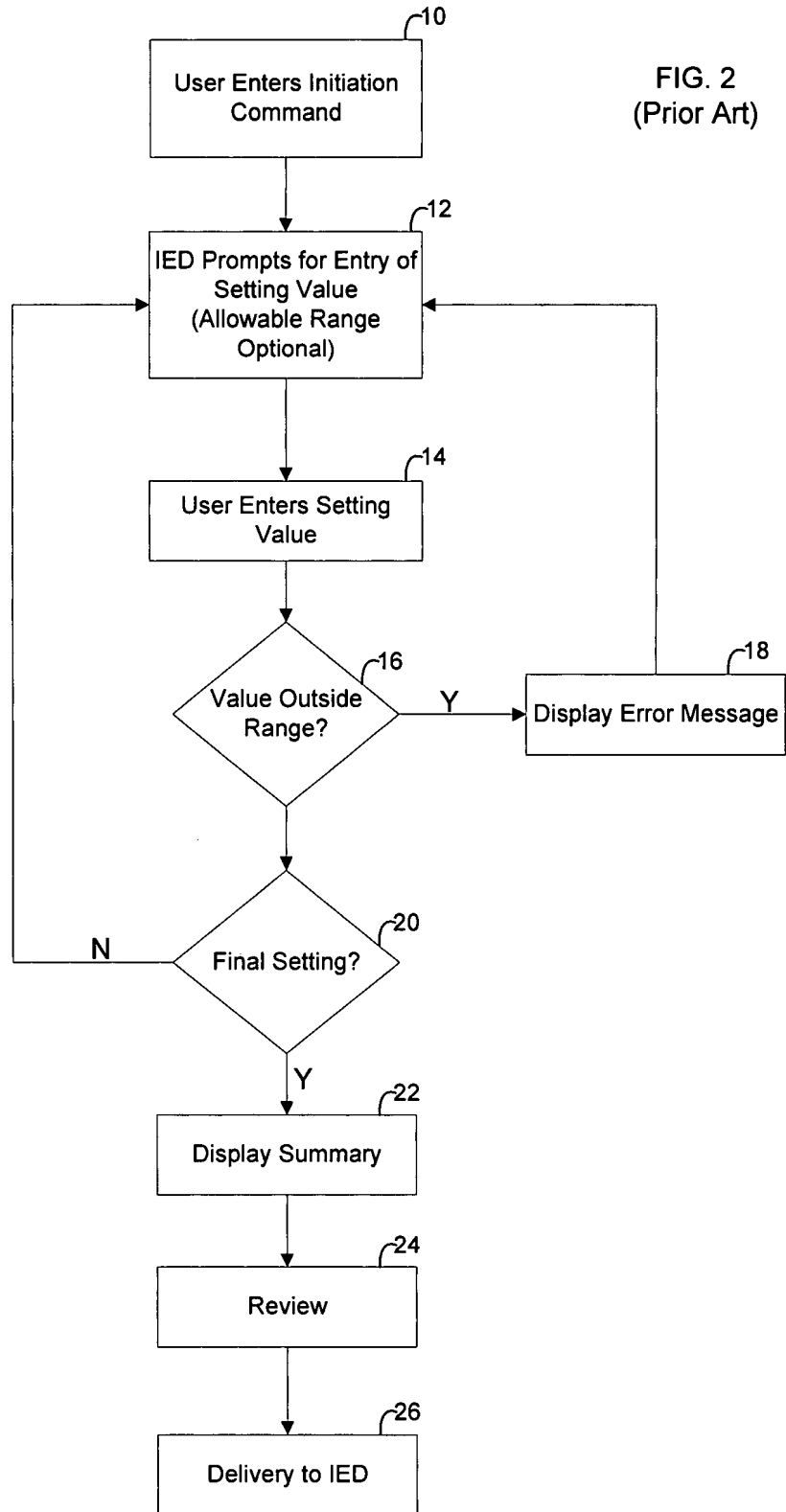


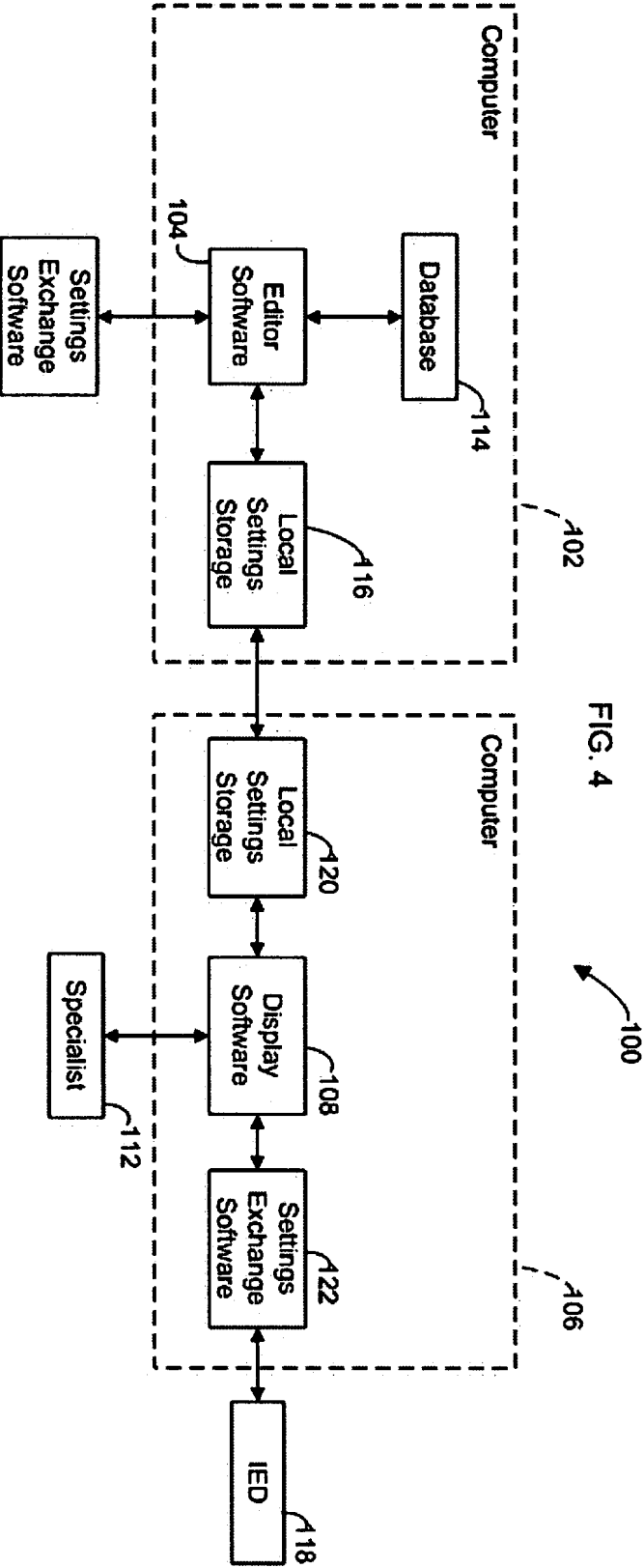
FIG. 3
(Prior Art)



Replacement Sheet

FIG. 2
(Prior Art)





Replacement Sheet

AcSELerator® Designer © Program Files\AcSELerator Designer\New Relay odb (Relay Editor New Relays Database) [Relay Editor] [Settings Database]

Eto Settings Communication Window Help

File Edit Options View Settings Database Help

General Settings

Relay Identifier Labels

RID Relay Identifier (3D char)

TID Terminal Identifier (3D char)

EXAMPLE: BUS B BREAKER 3

Previous Value
Default Value

Current Transformer Ratio

CTR Local Phase (A/B/C) CT Ratio

200 Range = 1 to 6000

APP Application

311L Select 87L, 87L21, 87L21P, 87LSP, 311L

EADVS Advanced Settings Enable

N Select Y, N

SEL-311L CUS Settings Driver Driver Version 2.1.7.4 Date 11/24/03 4:01:34 PM Port # 0311LSHCA4E304 Group 1: General Settings

Net Connected Direct to COM1 2400 Baudrate Terminal EIA-232 Serial File Name YModem screen captures Tery mod... AcSELEditor O Design...

Group 1

- ☐ Set 1
- ☒ Line Current
- ☐ Backup Pk
- ☐ Phase Dist
- ☐ Ground Dist
- ☐ Phase Instz
- ☐ Residual Gr
- ☐ Negative-Sr
- ☐ Phase Time
- ☐ Residual Gr
- ☐ Negative-Sr
- ☐ Out of Step
- ☐ Load Encro
- ☐ Directional I
- ☐ Voltage Ele
- ☐ Synchronizer
- ☐ Frequency I
- ☐ Rectosing F
- ☐ Switch-Onrit
- ☐ Comm. Assi
- ☐ Zone 1 Ext
- ☐ Demand Mf
- ☐ Other Seltr
- ☐ SE Logic Cc
- ☐ All Group 1
- ☒ Logic 1
- ☐ Graphical Logic
- ☐ Logic Simulator
- ☐ Group 2
- ☐ Group 3
- ☐ Group 4
- ☐ Group 5
- ☐ Group 6
- ☐ Global
- ☐ SER
- ☐ Text

FIG 5A

Replacement Sheet

AcSELErator® Designer DEMO - C:\Program Files\AcSELErator Designer\Relay.rdb - [Relay Editor - New Relay 1 (SEL-311L 005 Settings Driver)]

File Settings Communication Window Help

File Edit Options Search Import Export Help

Equation

[1*TID] = [UV*Group_1_TID]
[1*RID] = [UV*Group_1_RID]

Evaluation of Equation

EXAMPLE: BUS B, BRE...
SEL-311L

Send Value

EXAMPLE: BUS B, BRE...
SEL-311L

Relay Setting Range

ASCII string with a maximum length of 30
ASCII string with a maximum length of 30

Variable Selection List

Group 1_General Settings

Group_1_TID

[E: BUS B, BREAKER 3 ...] [E] [ASCII string with ...]

Group_1_RID

[SEL-311L ...] [E] [ASCII string with ...]

Set Properties for Group 1 TID

Name: Terminal Identified

Units: i.e. Hz, Amps, Volts

Range: Enter in all values and/or ranges separated by commas. For example 1..100.25], 20.0..100.0, OFF, 0.25, A, B.
A step range may be followed by a stepsize contained in brackets [0.25]. A stepsize has to be greater than zero.

Comments: ASCII string with a maximum length of 30
Add comments here - comments cannot exceed 100 characters.
☐ Disable Panel in Setting Form
☐ Hide Panel in Setting Form

OK Cancel

SEL-311L 005 Settings Driver

Driver Version: 2.1.7.4

Date: 11/24/03 4:01:34 PM

Part #: 0311LGHCA250X1

Not Connected

Direct to COM1 2400 8None-1

Terminal = EIA-232 Serial

File Xlar = YModem

Start

Micro Laptop-Wilson - Info...

Intenum C/S

screen captures Tony mod...

AcSELErator® Design...

10:54 AM

FIG 5B

Replacement Sheet

ACSELEATOR® Designer DEV10 - C:\Program Files\ACSELEATOR Designer\Relay.rdb - [Relay Editor - New Relay 1 (SEL-311L 005 Settings Driver *)]

File Settings Communication Window Help

File Edit Options Import Export Help

Equation	Evaluation of Equation	Send Value	Relay Setting Range
[1~TID] = [UV*Terminal_Identifier] [1~RID] = [UV*Group_1_RID]	EXAMPLE : BUS B, BREAC... SEL - 311L	EXAMPLE : BUS B, BREAC... SEL - 311L	ASCII string with a maximum length of 30 ASCII string with a maximum length of 30

Variable Selection List

Group 1_General Settings

Terminal_Identifier

BUS B, BREAKER 3

#ASCII string with a maximum length of 30

Group_1_RID (Units)

SEL-311L

#ASCII string with a maximum length of 30

SEL-311L 005 Settings Driver * Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1

Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = YModem

FIG 5C

Replacement Sheet

AcSELeRator® Designer DEMO - (C:\Program Files\AcSELeRator® Designer\Relay.rdb - [Relay Editor - New Relay 1 (SEL-311L 005 Settings Driver *)]

File Settings Communication Window Help

File Edit Options Import Export Help

Equation	Evaluation of Equation	Send Value	Relay Setting Range
[1*RID] = [UV*Terminal_Identifier] [1*RID] = [UV*Group_1_RID]	EXAMPLE : BUS B. BREA... SEL-311L	EXAMPLE : BUS B. BREA... SEL-311L	ASCII string with a maximum length of 30 ASCII string with a maximum length of 30

Variable Selection List

Group 1_General Settings

Terminal_Identifier

E : BUS B. BREAKER 3

#ASCII string with a maximum length of 30

Group_1_RID (Units)

SEL-311L

#ASCII string with a maximum length of 30

Save Relay As

Relays

Example SEL-351A 003
Example SEL-351A 005
Example SEL-351S 002
Example SEL-351S 003
Example SEL-351S 005
Example SEL-421 001
Example SEL-421 002
Example SEL-421 003
Example SEL-421-1 001
Example SEL-421-1 002
Example SEL-421-1 003

Relay Name
311L-6 Application Design

OK Cancel

SEL-311L 005 Settings Driver * Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1

Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = VModem

Start Microsoft Office 2000 S... LP630 Projector Controls AcSELeRator® screen captures - Micros...

9:44 AM

FIG 5D

Replacement Sheet

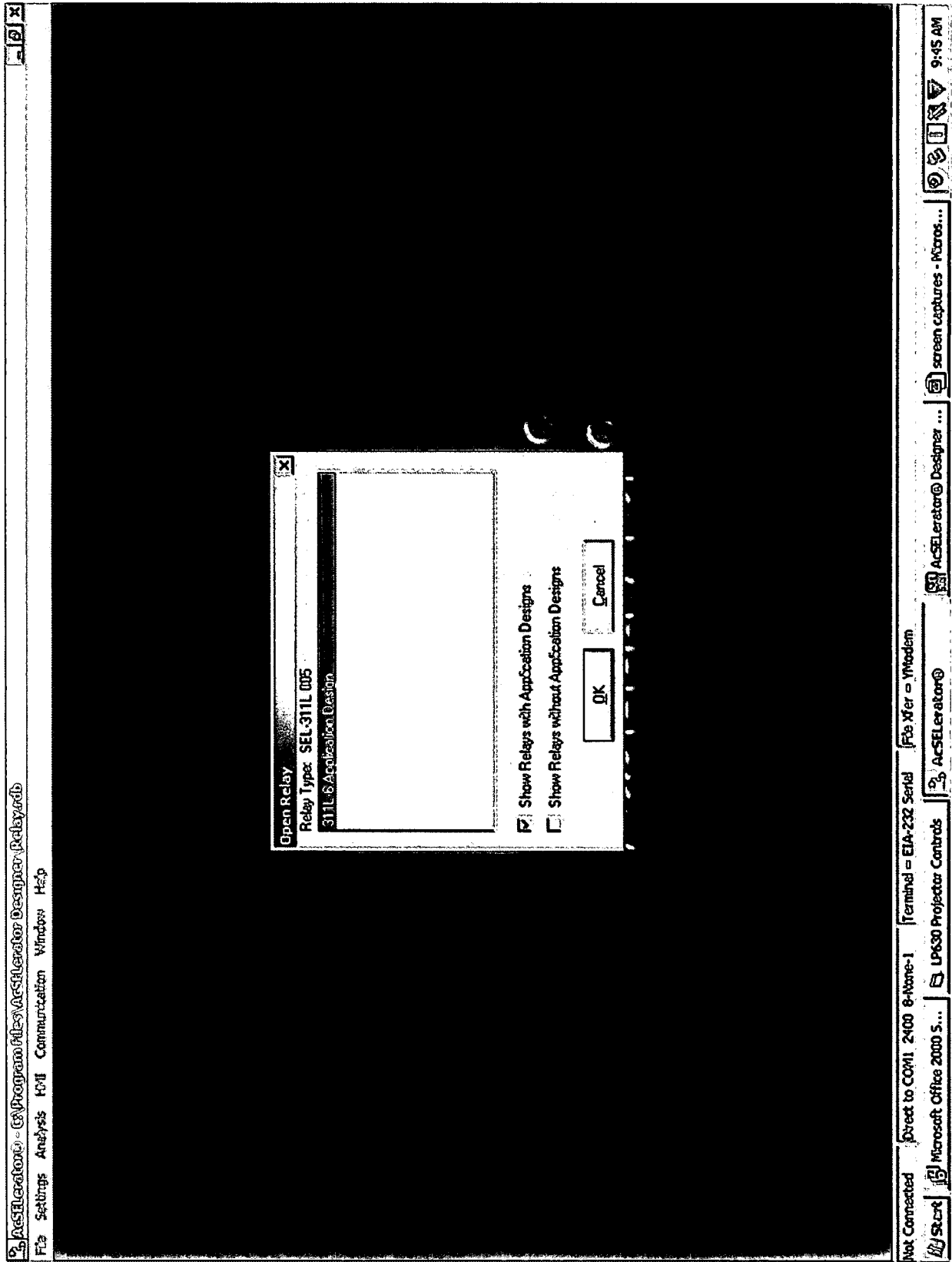


FIG 5E

Replacement Sheet

AcSElerator® - C:\Program Files\AcSElerator Designer\Relay.rdb - [Relay Editor - 311L-6 Application Design (SEL-311L 005 Settings Driver 0)]

File Settings Analysis Help Communication Window Help

File Help

Group 1_General Settings

Terminal_Identifier

EXAMPLE : BUS B, BR ...

ASCII string with a maximum length of 30

Group_1_RID (Units)

SEL-311L ...

ASCII string with a maximum length of 30

SEL-311L 005 Settings Driver *

Driver Version: 2.1.7.4

Date: 10/28/2003 12:03:52 PM

Part #: 0311L6HCA1254X1

Not Connected

Direct to COM1 2400 8-NONE-1

Terminal = EIA-232 Serial

File Xfer = YModem

FIG 5F

Replacement Sheet

SEL-311L 005 Settings Driver v2.1.7.4
File Settings Communication Windows Help

File Options << >> Copy Merge Compare Search Import Export Help

Group 1

Set 1

General Settings

Line Current Differential Settings

Backup Protection and Line Parameters

Phase Distance

Ground Distance

Phase Instantaneous Overcurrent

Residual Ground Instantaneous Overcurrent

Negative-Sequence Instantaneous Overcurrent

Phase Time-Overcurrent

Residual Ground Time-Overcurrent

Negative-Sequence Time-Overcurrent

Out-of-Step Settings

Load-Encroachment

Directional Elements

Voltage Elements

Synchrionism Check

Frequency Elements

Rectifying Relay

Switch-On-to-Fault

Comm. Assisted Trip Schemes

Zone 1 Extension Settings

Demand Metering

Other Settings

SEL Logic Control Equation Variable Timers

All Group 1 Settings

Logic 1

Graphical Logic 1

Logic Simulator 1

Group 2

Group 3

Group 4

Group 5

Group 6

Global

SER

Text

Channel X

General Settings

Relay Identifier Labels

RID Relay Identifier (30 chars)
SEL-311L

TID Terminal Identifier (30 chars)
EXAMPLE: BUS B, BREAKER 3

Current Transformer Ratio and Application Settings

CTR Local Phase (A,B,C) CT Ratio, CTR:1
200 Range = 1 to 6000

APP Application
311L Select: 07L, 07L21, 07L21P, 07LSP, 311L

EADVS Advanced Settings Enable
N Select: Y, N

SEL-311L 005 Settings Driver v2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 031116HCA4254X1 Group 1 : General Settings

Not Connected Direct to COM1 2400 8-N-1-1 Portend = EIA-232 Serial File Xfer = Windows

FIG 6A

Replacement Sheet

AcSELErator® Designer DEMO - C:\Program Files\AcSELErator Designer\Relayrdb - (Relay Editor - New Relay 1 (SEL-301L 005 Settings Driver 2))

File Settings Communication Window Help

File Options << >> Copy Merge Compare Search Import Export Help

Group 1

Set 1

General Settings

Line Current Differential Settings

Backup Protection and Line Parameters

Phase Distance

Ground Distance

Phase Instantaneous Overcurrent

Residual Ground Instantaneous Overcurrent

Negative-Sequence Instantaneous Overcurrent

Phase Time-Overcurrent

Residual Ground Time-Overcurrent

Negative-Sequence Time-Overcurrent

Out-of-Step Settings

Load-Encroachment

Directional Elements

Voltage Elements

Synchronism Check

Frequency Elements

Reclosing Relay

Switch-On-to-Fault

Comm. Assisted Trip Schemes

Zone 1 Extension Settings

Demand Metering

Other Settings

SE Logic Control Equation Variable Timers

All Group 1 Settings

Logic 1

Graphical Logic 1

Logic Simulator 1

Group 2

Group 3

Group 4

Group 5

Group 6

Global

SER

Text

Channel X

Line Current Differential Settings

Line Current Differential Configuration Settings

E87L Number of 87L Terminals
2 Select 2-3, 3R, N

EHST High Speed Tripping
2 Select 1-6, N

EHSDTT Enable High Speed Direct Transfer Trip
N Select Y, N

EDD Enable Delta Current Detect
N Select Y, N

ETAP Tapped Load Coordination
N Select Y, N

PCHAN Primary 87L Channel
X Select X, Y

EHSC Hot-Standby Channel Feature
N Select Y, N

CTR_X CTR at Terminal Connected to Channel X
Range = 1 to 6000

CTR_Y CTR at Terminal Connected to Channel Y
200 Range = 1 to 6000

SEL-311L 005 Settings Driver * Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1 Group 1 : Line Current Differential Settings

Not Connected Direct to COM1 2400 8-None-1 Terminal = EIA-232 Serial File Xfer = VModem

FIG 6B

The screenshot displays the 'ACS Selector Designer' application window. At the top, the title bar reads 'ACS Selector Designer - (C:\Program Files\ACS Selector Designer\Relay.rdb) - [Relay Editor - New Relay 1 (SER-311L 005 Settings Driver *)]'. The menu bar includes File, Edit, Options, Import, Export, and Help. Below the menu is a toolbar with icons for file operations and settings. The main workspace is divided into two panes. The left pane, titled 'Variable Selection List', contains a table with columns 'Equation', 'Evaluation of Equation', 'Send Value', and 'Relay Setting Range'. It lists two equations: '[1^CTR_X] = [UV^Group_1_CTR_X]' and '[1^CTR] = [UV^Group_1_CTR]', both evaluated at 200, with a send value of 200 and a range from 1..6000. The right pane, titled 'Group_1_General Settings', shows fields for 'Group_1_CTR (Units)' set to 200 and 'Range = 1..6000'. A modal dialog box is open over the right pane, titled 'Tab Name', with a text input field containing 'Enter in Tab Name' and a button labeled 'CTR Settings'. The dialog has 'OK' and 'Cancel' buttons at the bottom. The status bar at the bottom provides system information: 'Driver Version: 2.1.7.4', 'Date: 10/28/2003 12:03:52 PM', 'Port #: 0311L6HCA4254X1', 'Terminal = EIA-232 Serial', 'File Xfer = YModem', 'Direct to COM1 2400 8-NONE-1', 'UP630 Projector Controls', 'Microsoft Office 2000 S...', 'ACS Selector Design...', 'screen captures - Micros...', and a clock showing '9:52 AM'.

FIG 6C

SEL-311L 005 Settings Driver * [Driver Version: 2.1.7.4] [Date: 10/28/2003 12:03:52 PM] [Part #: 0311L6HCA4254X1]

Not Connected [Direct to COM1] 2400 8-None-1 [Terminal = EIA-232 Serial] [File Xfer = YModem]

File Edit Options Import Export Help

Equation	Evaluation of Equation	Send Value	Relay Setting Range
I ¹ CTR_X1 = (UV*Group_1_CTR_X_1)	200	200	1..6000
I ¹ CTR1 = (UV*Group_1_CTR_1)	200	200	1..6000

Variable Selection List

CTR Settings

Group_1_CTR_1 (Units)
 [200] [Range = 1..6000]

Group_1_CTR_X_1 (Units)
 [200] [Range = 1..6000]

FIG 6D

File	Edit	Options	Import	Export	Help
View					
Error Messages					
Allow switching to Editor Mode From Setting Form					
Part Number					

Equation	Evaluation of Equation	Send Value	Relay Setting Range
[1] CTR_X = [UV]	200	200	1..6000
[1] CTR = [UV]	200	200	1..6000

Variable Selection List

CTR Settings

Group_1_CTR_1 (Units)

[200] [Range = 1..6000]

Group_1_CTR_X_1 (Units)

[200] [Range = 1..6000]

SEL-311L 005 Settings Driver • Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311LGHCAM25X1

Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = YModem

Start Microsoft Office 2000 S... LP630 Projector Controls AcSELElator® Design screen captures - Micros...

AcSELElator® 9:55 AM

FIG 6E

Replacement Sheet

ACSELElator® - C:\Program Files\ACSELElator Designer\RelayTab - (Relay Editor - 3101-6 Application Design 2 (SEL-3101-005 Settings Driver 2))

File Settings Analysis HMI Communication Window Help

File Options Help

CTR So View Editor Mode Ctrl+E

Group_1_CTR_1 (Units)

200 Range = 1..6000

Group_1_CTR_X_1 (Units)

200 Range = 1..6000

SEL-3101-005 Settings Driver * Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1

Not Connected Direct to COM1 2400 8-None-1 Terminal = EIA-232 Serial File Xfer = YModem

Start Microsoft Office 2000 S... UP600 Projector Controls ACSELElator® screen captures - Macros...

9:56 AM

FIG 6F

Replacement Sheet

ACSELEATOR® - C:\Program Files\ACSELEATOR\Designer\Relay.rdb - [Relay Editor - 3011-6 Application Design 2 (SEL-311L 005 Settings Driver 0)]

File Settings Analysis HMI Communication Windows Help

File Options << >> Copy Merge Compare Search Input Export Help

Group 1

Set 1

General Settings

Line Current Differential Settings

Backup Protection and Line Parameters

Phase Distance

Ground Distance

Phase Instantaneous Overcurrent

Residual Ground Instantaneous Overcurrent

Negative-Sequence Instantaneous Overcurrent

Phase Time-Overcurrent

Residual Ground Time-Overcurrent

Negative-Sequence Time-Overcurrent

Out-of-Step Settings

Load-Encroachment

Directional Elements

Voltage Elements

Synchronization Check

Frequency Elements

Reclosing Relay

Switch-On-to-Fault

Comm. Assisted Trip Schemes

Zone 1 Extension Settings

Demand Metering

Other Settings

SE Logic Control Equation Variable Timers

All Group 1 Settings

Logic 1

Graphical Logic 1

Logic Simulator 1

Group 2

Group 3

Group 4

Group 5

Group 6

Global

SER

Text

Channel X

General Settings

Relay Identifier Labels

RID Relay Identifier (30 chars)
SEL-311L

TID Terminal Identifier (30 chars)
EXAMPLE: BUS B, BREAKER 3

Current Transformer Ratio and Application Settings

CTR Local Phase (A|B|C) CT Ratio, CTR:1
200 Range = 1 to 8000

APP Application
311L Select 87L, 87L21, 87L21P, 87LSP, 311L

EADVS Advanced Settings Enable
N Select Y, N

SEL-311L 005 Settings Driver 0 Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1 Group 1 : General Settings

Not Connected Direct to CC011 2400 8-Wire-1 Terminal = EIA-232 Serial File Xfer = Windows

FIG 6G

The screenshot displays the AcSELElator Designer software interface. The main window has a menu bar with 'File', 'Edit', 'Options', 'Search', 'Import', 'Export', and 'Help'. The status bar at the bottom shows 'SEEL-311L 005 Settings Driver', 'Driver Version: 2.1.7.4', 'Date: 11/24/03 4:01:34 PM', 'Part #: 0311LGHCA4254X1', 'Direct to COM1 2400 8None-1', 'Terminal = EIA-232 Serial', 'File Xfer = YModem', 'screen captures Tony mod...', and 'AcSELElator Design...'. The 'Equation Builder' dialog box is open, showing the equation being built. The 'Equation' section at the top has three columns: 'Equation', 'Send Value', and 'Relay Setting Range'. The 'Equation' column contains 'I1^CTR' = (UV^Group_1_CTR_X) and 'I1^CTR_X' = (UV^Group_1_CTR_X). The 'Send Value' column contains '200' and '200'. The 'Relay Setting Range' column contains '1.6000' and '1.6000'. The 'Equation Builder' section in the middle has a large text area for building the equation, currently showing '= (UV^Group_1_CTR_X)'. Below the text area is a toolbar with logical operators: 'And', 'Or', 'Not', 'If', 'Then', 'Else', 'End If', 'Loop', 'Repeat', 'While', 'Do', 'Until', 'For', 'Next', 'Goto', 'Return', 'Break', 'Continue', 'Exit', 'End'. The 'Variable Selection' section at the bottom has a list of variables: 'I1^CTR', 'I1^CTR_X', 'UV^Group_1_CTR_X', 'UV^Group_1_CTR_X_1', 'UV^Group_1_CTR_X_2', 'UV^Group_1_CTR_X_3', 'UV^Group_1_CTR_X_4', 'UV^Group_1_CTR_X_5', 'UV^Group_1_CTR_X_6', 'UV^Group_1_CTR_X_7', 'UV^Group_1_CTR_X_8', 'UV^Group_1_CTR_X_9', 'UV^Group_1_CTR_X_10', 'UV^Group_1_CTR_X_11', 'UV^Group_1_CTR_X_12', 'UV^Group_1_CTR_X_13', 'UV^Group_1_CTR_X_14', 'UV^Group_1_CTR_X_15', 'UV^Group_1_CTR_X_16', 'UV^Group_1_CTR_X_17', 'UV^Group_1_CTR_X_18', 'UV^Group_1_CTR_X_19', 'UV^Group_1_CTR_X_20', 'UV^Group_1_CTR_X_21', 'UV^Group_1_CTR_X_22', 'UV^Group_1_CTR_X_23', 'UV^Group_1_CTR_X_24', 'UV^Group_1_CTR_X_25', 'UV^Group_1_CTR_X_26', 'UV^Group_1_CTR_X_27', 'UV^Group_1_CTR_X_28', 'UV^Group_1_CTR_X_29', 'UV^Group_1_CTR_X_30', 'UV^Group_1_CTR_X_31', 'UV^Group_1_CTR_X_32', 'UV^Group_1_CTR_X_33', 'UV^Group_1_CTR_X_34', 'UV^Group_1_CTR_X_35', 'UV^Group_1_CTR_X_36', 'UV^Group_1_CTR_X_37', 'UV^Group_1_CTR_X_38', 'UV^Group_1_CTR_X_39', 'UV^Group_1_CTR_X_40', 'UV^Group_1_CTR_X_41', 'UV^Group_1_CTR_X_42', 'UV^Group_1_CTR_X_43', 'UV^Group_1_CTR_X_44', 'UV^Group_1_CTR_X_45', 'UV^Group_1_CTR_X_46', 'UV^Group_1_CTR_X_47', 'UV^Group_1_CTR_X_48', 'UV^Group_1_CTR_X_49', 'UV^Group_1_CTR_X_50', 'UV^Group_1_CTR_X_51', 'UV^Group_1_CTR_X_52', 'UV^Group_1_CTR_X_53', 'UV^Group_1_CTR_X_54', 'UV^Group_1_CTR_X_55', 'UV^Group_1_CTR_X_56', 'UV^Group_1_CTR_X_57', 'UV^Group_1_CTR_X_58', 'UV^Group_1_CTR_X_59', 'UV^Group_1_CTR_X_60', 'UV^Group_1_CTR_X_61', 'UV^Group_1_CTR_X_62', 'UV^Group_1_CTR_X_63', 'UV^Group_1_CTR_X_64', 'UV^Group_1_CTR_X_65', 'UV^Group_1_CTR_X_66', 'UV^Group_1_CTR_X_67', 'UV^Group_1_CTR_X_68', 'UV^Group_1_CTR_X_69', 'UV^Group_1_CTR_X_70', 'UV^Group_1_CTR_X_71', 'UV^Group_1_CTR_X_72', 'UV^Group_1_CTR_X_73', 'UV^Group_1_CTR_X_74', 'UV^Group_1_CTR_X_75', 'UV^Group_1_CTR_X_76', 'UV^Group_1_CTR_X_77', 'UV^Group_1_CTR_X_78', 'UV^Group_1_CTR_X_79', 'UV^Group_1_CTR_X_80', 'UV^Group_1_CTR_X_81', 'UV^Group_1_CTR_X_82', 'UV^Group_1_CTR_X_83', 'UV^Group_1_CTR_X_84', 'UV^Group_1_CTR_X_85', 'UV^Group_1_CTR_X_86', 'UV^Group_1_CTR_X_87', 'UV^Group_1_CTR_X_88', 'UV^Group_1_CTR_X_89', 'UV^Group_1_CTR_X_90', 'UV^Group_1_CTR_X_91', 'UV^Group_1_CTR_X_92', 'UV^Group_1_CTR_X_93', 'UV^Group_1_CTR_X_94', 'UV^Group_1_CTR_X_95', 'UV^Group_1_CTR_X_96', 'UV^Group_1_CTR_X_97', 'UV^Group_1_CTR_X_98', 'UV^Group_1_CTR_X_99', 'UV^Group_1_CTR_X_100', 'UV^Group_1_CTR_X_101', 'UV^Group_1_CTR_X_102', 'UV^Group_1_CTR_X_103', 'UV^Group_1_CTR_X_104', 'UV^Group_1_CTR_X_105', 'UV^Group_1_CTR_X_106', 'UV^Group_1_CTR_X_107', 'UV^Group_1_CTR_X_108', 'UV^Group_1_CTR_X_109', 'UV^Group_1_CTR_X_110', 'UV^Group_1_CTR_X_111', 'UV^Group_1_CTR_X_112', 'UV^Group_1_CTR_X_113', 'UV^Group_1_CTR_X_114', 'UV^Group_1_CTR_X_115', 'UV^Group_1_CTR_X_116', 'UV^Group_1_CTR_X_117', 'UV^Group_1_CTR_X_118', 'UV^Group_1_CTR_X_119', 'UV^Group_1_CTR_X_120', 'UV^Group_1_CTR_X_121', 'UV^Group_1_CTR_X_122', 'UV^Group_1_CTR_X_123', 'UV^Group_1_CTR_X_124', 'UV^Group_1_CTR_X_125', 'UV^Group_1_CTR_X_126', 'UV^Group_1_CTR_X_127', 'UV^Group_1_CTR_X_128', 'UV^Group_1_CTR_X_129', 'UV^Group_1_CTR_X_130', 'UV^Group_1_CTR_X_131', 'UV^Group_1_CTR_X_132', 'UV^Group_1_CTR_X_133', 'UV^Group_1_CTR_X_134', 'UV^Group_1_CTR_X_135', 'UV^Group_1_CTR_X_136', 'UV^Group_1_CTR_X_137', 'UV^Group_1_CTR_X_138', 'UV^Group_1_CTR_X_139', 'UV^Group_1_CTR_X_140', 'UV^Group_1_CTR_X_141', 'UV^Group_1_CTR_X_142', 'UV^Group_1_CTR_X_143', 'UV^Group_1_CTR_X_144', 'UV^Group_1_CTR_X_145', 'UV^Group_1_CTR_X_146', 'UV^Group_1_CTR_X_147', 'UV^Group_1_CTR_X_148', 'UV^Group_1_CTR_X_149', 'UV^Group_1_CTR_X_150', 'UV^Group_1_CTR_X_151', 'UV^Group_1_CTR_X_152', 'UV^Group_1_CTR_X_153', 'UV^Group_1_CTR_X_154', 'UV^Group_1_CTR_X_155', 'UV^Group_1_CTR_X_156', 'UV^Group_1_CTR_X_157', 'UV^Group_1_CTR_X_158', 'UV^Group_1_CTR_X_159', 'UV^Group_1_CTR_X_160', 'UV^Group_1_CTR_X_161', 'UV^Group_1_CTR_X_162', 'UV^Group_1_CTR_X_163', 'UV^Group_1_CTR_X_164', 'UV^Group_1_CTR_X_165', 'UV^Group_1_CTR_X_166', 'UV^Group_1_CTR_X_167', 'UV^Group_1_CTR_X_168', 'UV^Group_1_CTR_X_169', 'UV^Group_1_CTR_X_170', 'UV^Group_1_CTR_X_171', 'UV^Group_1_CTR_X_172', 'UV^Group_1_CTR_X_173', 'UV^Group_1_CTR_X_174', 'UV^Group_1_CTR_X_175', 'UV^Group_1_CTR_X_176', 'UV^Group_1_CTR_X_177', 'UV^Group_1_CTR_X_178', 'UV^Group_1_CTR_X_179', 'UV^Group_1_CTR_X_180', 'UV^Group_1_CTR_X_181', 'UV^Group_1_CTR_X_182', 'UV^Group_1_CTR_X_183', 'UV^Group_1_CTR_X_184', 'UV^Group_1_CTR_X_185', 'UV^Group_1_CTR_X_186', 'UV^Group_1_CTR_X_187', 'UV^Group_1_CTR_X_188', 'UV^Group_1_CTR_X_189', 'UV^Group_1_CTR_X_190', 'UV^Group_1_CTR_X_191', 'UV^Group_1_CTR_X_192', 'UV^Group_1_CTR_X_193', 'UV^Group_1_CTR_X_194', 'UV^Group_1_CTR_X_195', 'UV^Group_1_CTR_X_196', 'UV^Group_1_CTR_X_197', 'UV^Group_1_CTR_X_198', 'UV^Group_1_CTR_X_199', 'UV^Group_1_CTR_X_200', 'UV^Group_1_CTR_X_201', 'UV^Group_1_CTR_X_202', 'UV^Group_1_CTR_X_203', 'UV^Group_1_CTR_X_204', 'UV^Group_1_CTR_X_205', 'UV^Group_1_CTR_X_206', 'UV^Group_1_CTR_X_207', 'UV^Group_1_CTR_X_208', 'UV^Group_1_CTR_X_209', 'UV^Group_1_CTR_X_210', 'UV^Group_1_CTR_X_211', 'UV^Group_1_CTR_X_212', 'UV^Group_1_CTR_X_213', 'UV^Group_1_CTR_X_214', 'UV^Group_1_CTR_X_215', 'UV^Group_1_CTR_X_216', 'UV^Group_1_CTR_X_217', 'UV^Group_1_CTR_X_218', 'UV^Group_1_CTR_X_219', 'UV^Group_1_CTR_X_220', 'UV^Group_1_CTR_X_221', 'UV^Group_1_CTR_X_222', 'UV^Group_1_CTR_X_223', 'UV^Group_1_CTR_X_224', 'UV^Group_1_CTR_X_225', 'UV^Group_1_CTR_X_226', 'UV^Group_1_CTR_X_227', 'UV^Group_1_CTR_X_228', 'UV^Group_1_CTR_X_229', 'UV^Group_1_CTR_X_230', 'UV^Group_1_CTR_X_231', 'UV^Group_1_CTR_X_232', 'UV^Group_1_CTR_X_233', 'UV^Group_1_CTR_X_234', 'UV^Group_1_CTR_X_235', 'UV^Group_1_CTR_X_236', 'UV^Group_1_CTR_X_237', 'UV^Group_1_CTR_X_238', 'UV^Group_1_CTR_X_239', 'UV^Group_1_CTR_X_240', 'UV^Group_1_CTR_X_241', 'UV^Group_1_CTR_X_242', 'UV^Group_1_CTR_X_243', 'UV^Group_1_CTR_X_244', 'UV^Group_1_CTR_X_245', 'UV^Group_1_CTR_X_246', 'UV^Group_1_CTR_X_247', 'UV^Group_1_CTR_X_248', 'UV^Group_1_CTR_X_249', 'UV^Group_1_CTR_X_250', 'UV^Group_1_CTR_X_251', 'UV^Group_1_CTR_X_252', 'UV^Group_1_C

FIG 7A

FIG 7B

Replacement Sheet

SEL-311L Levator Designer DE MO C:\Program Files\AcSEL Levator Designer\Relay rdb - [Relay Editor - New Relay 1 (Set 1 310L 005 Settings Driver)]

File Settings Communication Window Help

File Edit Options Search Import Export Help

Equation

11*CTR) = [UV*Group_1_CTR]

200

200

1.6000

Variable Selection List

CTR Settings

Group_1_CTR

200

Range = 1.6000

SEL-311L 005 Settings Driver Driver Version: 2.1.7.4 Date: 11/24/03 0:01:34 PM Part #: 0311L6MCA423-01

Not Connected Direct to COM1 2400 8None-1 Terminal = EIA-232 Serial Flow Rate = YModem

Micro Laptop-Wireless - Info... Initialm C/S Screen captures Tery mod... AcSEL Levator Designer...

11/24/03 11:39 AM

FIG 7C

Replacement Sheet

AcSElerator® - C:\Program Files\AcSElerator Designer\Relay.rdb - [Relay Editor - 311L 005 Application Design 2 (SEL-311L 005 Settings Driver 0)]

File Settings Analysis HMI Communication Window Help

File Options Help

CTA Settings

CT_Ratios

200

Range = 100, 1000 #Current Transformer Turns Ratio

SEL-311L 005 Settings Driver * Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1

Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = YModem

Start Microsoft Office 2000 S... LP630 Projector Controls AcSElerator® screen captures - Micros...

10:20 AM

FIG 7D

File Edit Options Import Export Help

Equation

Equation	Evaluation of Equation	Send Value	Relay Setting Range
[1*CTR_X] = [UV*CT_Ratios]	200	200	1..6000
[1*CTR] = [UV*CT_Ratios]	200	200	1..6000

Add Equation
 Edit Equation
 Delete Equation
 Manage Custom Variables

Variable Selection List

CTR Settings

CT_Ratios
 [200] Range = 100..1000 #Current Transformer Turns Ratio

Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA1254X1
 Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = YModem
 Start Microsoft Office 2000 S... UPS30 Projector Controls ACSELElator® Design... screen captures - Micros...

FIG 8A

[illegible]

FIG 8B

SEL-311L-005 Settings Driver* Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1

Not Connected Direct to COM1 2400 8-None-1 Terminal = EIA-232 Serial File Xfer = YModem

Start Microsoft Office 2000 S... LP630 Projector Controls ACSELEATOR® screen captures - Micros... 10:27 AM

File Edit Options Import Export Help

File Settings Communication Window Help

Equation

Equation	Evaluation of Equation	Send Value	Relay Setting Range
(I^CTR_X) = (UV^CT_Relios)	200	200	1..6000
(I^CTR) = (UV^CT_Relios)	200	200	1..6000

Equation Builder

Variable Selector

CT_Relios
Group_1_CTR_1
Group_1_CTR_X_1

Relay Settings
Custom Variables
Relay Word Bits
Analog Quantities

Manage Custom Variables

CT_Relios
Group_1_CTR_1
Group_1_CTR_X_1

Manage Variables

CT_Relios
Group_1_CTR_1
Group_1_CTR_X_1

Apply

Close

Manage Variables

Session

Left <Group>: <Setting: Range = <None Selected>

FIG 8C

[illegible]

FIG 8D

[illegible]

FIG 8E

Replacement Sheet

ACSELElator® - C:\Program Files\AcSELElator Designer\Relay.rdb - [Relay Editor - 311L 005 Settings Driver ')]

File Settings Analysis MMI Communication Window Help

File Options Help

CTR Settings

Nominal Current (Amps Primary)

1800

Range = 600, 800, 1000, 1500, 2000 #Enter Primary Nominal Current, e.g. for 1000.5 CT's, enter 1000

SEL-311L 005 Settings Driver * Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA1254X1

Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = YModem

Start Microsoft Office 2000 S... LP630 Projector Controls ACSELElator® screen captures - Micros... 10:35 AM

FIG 8F

Replacement Sheet

SEL-311L 005 Settings Driver *
File Settings Communication Window Help

File Edit Options Import Export Help

Equation

[L1*OUT101] = (UV*Selogic_1_OUT101)

Evaluation of Equation

TRIP

Send Value

TRIP

Relay Setting Range

SELogic equation

Variable Selection List

Selogic_1_OUT101 (Units)
TRIP

Manage Custom Variables

Selogic_1_OUT101
Test_Overcurrent
Test_Overvoltage
Test_UnderVoltage

Add Variable
Rename Variable
Delete Variable

Close

SEL-311L 005 Settings Driver *
Direct to COM1 2400 8-NONE-1
Not Connected

Driver Version: 2.1.7.4
Date: 10/28/2009 12:03:52 PM
Part #: 031116HCA425AXI

Terminal = EIA-232 Serial
File Xfer = YModem

LP630 Projector Controls
ACSELEerator®

screen captures - Micros...

Start
10:47 AM

FIG 9A

SEL-311L 005 Settings Driver * [Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM] Part #: 0311L6HCA4254X1

Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = YModem

Start Microsoft Office 2000 S... LPS30 Projector Controls AcSELElator® screen captures - Micros... 10:47 AM

File Edit Options Input Export Help

Equation

[L1*OUT101] = [UV*Selogic_1_OUT101]

Add Equation

Edit Equation

Delete Equation

Manage Custom Variables

Variable Selection List

Equation

TRIP

SELogic equation

Equation

TRIP

SELogic equation

Equation

TRIP

SELogic equation

FIG 9B

[illegible]

FIG 9C

Replacement Sheet

SEL-311L 005 Settings Driver *
C:\Program Files\AcSELerator Designer\Relay.rdb - [Relay Editor - New Relay 1 (SEL-311L 005 Settings Driver *)]
File Settings Communication Window Help

File Edit Options Input Export Help

Equation	Evaluation of Equation	Send Value	Relay Setting Range
[LT^OUT101] = [UV^SelLogic_1_OUT101]	TRIP	TRIP	SELogic equation
[UV^Test_Overcurrent] = [R8^51G] + [R8^50P1] + [R8^51Q]	51G + 50P1 + 51Q		N/A
[UV^Test_Overvoltage] = [R8^59A] + [R8^59B] + [R8^59C]	59A + 59B + 59C		N/A
[UV^Test_Undervoltage] = [R8^27A] + [R8^27B] + [R8^27C]	27A + 27B + 27C		N/A

Variable Selection List

SelLogic_1_Output Contacts

SelLogic_1_OUT101 (Units)
TRIP
#SELogic equation

SEL-311L 005 Settings Driver *
Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA4254X1
Not Connected Direct to COM1 2400 8-None-1 Terminal = EIA-232 Serial File Xfer = VModem
Start Microsoft Office 2000 S... UP630 Protector Controls AcSELerator Design screen captures - Micros... 10:55 AM

FIG 9D

File Settings Communication Windows Help

Equation	Evaluation of Equation	Send Value	Relay Setting Range
$[L1_OUT101] = [UV_SELogic_1_OUT101]$	TRIP	TRIP	SELogic equation
$[UV_Test_Overcurrent] = [R8_51G] + [R8_50P1] + [R8_51Q]$	51G + 50P1 + 51Q		N/A
$[UV_Test_Overvoltage] = [R8_53A] + [R8_53B] + [R8_53C]$	53A + 53B + 53C		N/A
$[UV_Test_Undervoltage] = [R8_27A] + [R8_27B] + [R8_27C]$	27A + 27B + 27C		N/A

Variable Selection List

SELogic_1_Output Contacts

SELogic_1_OUT101

TRIP

Range: TEST_C

Set Properties for SELogic_1_OUT101

Name: SELogic_1_OUT101

Units: i.e. Hz, Amps, Volts

Range: TEST_OVERCURRENT, TEST_OVERVOLTAGE, TEST_UNDERVOLT

Enter in all values and/or ranges separated by commas. For example 1, 10, 0.25, 20.0, 100.0, OFF, 0.25, A, B.

A step range may be followed by a stepsize contained in brackets [0.25]. A stepsize has to be greater than zero.

Comments:

Select one from list

Add comments here - comments cannot exceed 100 characters.

☐ Disable Panel in Setting Form

☐ Hide Panel in Setting Form

OK Cancel

2:08 PM

Replacement Sheet

AcSElerator® - C:\Program Files\AcSElerator Designer\Relay.rdb - [Relay Editor - 311L-6 Application Design 5 (SEL-311L 005 Settings Driver 3)]

File Settings Analysis MMI Communication Window Help

File Help

Setlogic 1 Output Contacts

Setlogic_1_OUT101

52A

Range = TEST_OVERCURRENT, TEST_OVERVOLTAGE, TEST_UNDERVOLTAGE, TRIP #Select one from list

SEL-311L 005 Settings Driver * Driver Version: 2.1.7.4 Date: 10/28/2003 12:03:52 PM Part #: 0311L6HCA1254X1

Not Connected Direct to COM1 2400 8-NONE-1 Terminal = EIA-232 Serial File Xfer = YModem

Start Microsoft Office 2000 S... LP630 Protector Controls AcSElerator® screen captures - Micros... 10:58 AM

FIG 9F

File Edit Options Search Import Export Help View			
Equation		Evaluation of Equation	Send Value
RL1OUT101 = IU	Error Message	51G * 50P1 + 51Q	51G * 50P1 + 51Q
IUV Test Overcu		51G * 50P1 + 51Q	SELoggs equation
IUV Test Overcu	Alerts switching to Editor Mode From Setting Form	59A * 59B + 59C	N/A
IUV Test Underv		27A * 27B + 27C	N/A
	Port Number		

Variable Selection List	SELoggs 1 Output Contacts
	SELoggs 1_OUT101
	test_Overcurrent

Range = TEST_OVERCURRENT, TEST_OVERVOLTAGE, TEST_UNDERVOLTAGE, TRIP (Selected from list)
--

SELoggs 1_OUT101	test_Overcurrent
------------------	------------------

FIG 10A

Equation	Evaluation of Equation	Send Value	Relay Setting Range
[L1^OUT101] = [UV^Selogic_1_OUT101] [UV^Test_Overcurrent] = [RB^51G] * [RB^50P1] + [RB^51Q] [UV^Test_Undervoltage] = [RB^59A] + [RB^59B] + [RB^59C] [UV^Test_Undervoltage] = [RB^27A] + [RB^27B] + [RB^27C]	51G * 50P1 + 51Q 51G * 50P1 + 51Q 59A + 59B + 59C 27A + 27B + 27C	51G * 50P1 + 51Q	SELogic equation N/A N/A N/A

Variable Selection List	Selogic_1_Output Contacts
	<p>Selogic_1_OUT101</p> <p>[TEST_OVERCURRENT] ... Range = TEST_OVERCURRENT, TEST_OVERVOLTAGE, TEST_UNDERVOLTAGE, TRIP #Select one from list</p>

Settings Group/Class Select

Send Groups

- ☐ Test
- ☒ Selogic 1
- ☐ Selogic 2
- ☐ Selogic 3
- ☐ Selogic 4
- ☐ Selogic 5
- ☐ Selogic 6
- ☐ SER
- ☐ Channel X
- ☐ Channel Y

OK Cancel

FIG 10B